REMARKS:

1) Entry and consideration of this Response After Final are respectfully requested. The amendment merely incorporates the subject matter of claim 9 into independent claim 7, and cancels claim 9. Since claim 9 had previously been considered, this amendment does not raise any new issues that would require new search or consideration. Also, the number of claims has not been increased, and this amendment places the application in better form for Appeal, if that should become necessary. The present Amendment and Remarks are directly responsive to, and applicants' first opportunity to reply to, the new grounds of rejection that were applied for the first time in the Final Office Action. For these reasons, entry and consideration of this Response After Final are appropriate and respectfully requested.

2) Referring to item 10) of the Office Action Summary, please accept the originally filed drawings.

3) In the present Amendment, independent claim 7 has been amended to incorporate the subject matter of prior claim 9, which has been canceled. The dependency of claim 10 has been revised accordingly. After the present amendment, all of the remaining claims 7, 8 and 10 to 13 read on the elected Species I of Fig. 2.

4) Referring to pages 2 to 4 of the Office Action, the rejection of claims 7 to 12 as obvious over US Patent 5,609,757 (Schiavo et al.) in view of US Patent 3,428,208 (Kosar) is respectfully traversed.

Applicants' remarks and arguments as set forth in the previous Responses are incorporated herein by reference and expressly reasserted.

Independent claim 7 has been amended to incorporate the subject matter of prior claim 9. Thus, claim 7 is now limited to the protrusion having radially inner and radially arcuate curved protrusion surfaces, and the **recess** having radially inner and radially outer **recess** wall portions that each have an **arcuate curved shape** in an axial section. The arcuate curved protrusion surfaces cooperate with the arcuate curved recess wall portions to form first and second circular seals at locations within a depth of the recess displaced away from the terminal outer free edges of the recess wall portions. These features of amended independent claim 7 are especially exemplified by the elected embodiment of present Fig. 2.

The Examiner has acknowledged that Schiavo et al. fail to disclose features corresponding to the presently claimed features of the protrusion and recess. In this regard, the Examiner has turned to the Kosar reference, and particularly Fig. 1 of Kosar.

Regarding the features of prior claim 9, now incorporated into independent claim 7, the Examiner has acknowledged that Kosar fails to disclose the recess wall portions as respectively having an arcuate curved shape. In fact, the asserted embodiment according to Fig. 1 of Kosar expressly uses an arcuate curved

protrusion (4) cooperating with a **V-shaped** groove or recess (3) (see Fig. 1 and col. 2, lines 32 to 55). Also note that Fig. 4 is said to be similar to Fig. 1, except for the components being inverted (col. 2, lines 23 and 24), and Fig. 4 also involves an arcuate curved protrusion (4a) penetrating into and cooperating with a **V-shaped** groove (3a) (col. 3, lines 3 to 6). Moreover, Kosar expressly relies on the cooperation of the arcuate curved protrusion with the **V-shaped** groove to achieve the formation of two circular line seals (7) therebetween at locations within the depth of the groove or recess (see col. 2, lines 32 to 52).

There would have been no suggestion toward providing a combination of a protrusion and a recess with shapes and features as presently claimed to form two circular seals at locations within a depth of the recess as presently claimed. In fact, note that the embodiment of Fig. 12 of Kosar (which was asserted by the Examiner in the previous Office Action) uses an arcuate curved protrusion cooperating with an arcuate curved recess, and actually forms two circular seals at the **corners or terminal edges** of the concave recess. Thus, a person of ordinary skill would have understood that the combination of an arcuate curved protrusion with an arcuate curved recess would have resulted in the formation of circular seals at the **terminal edges** of the recess, while the combination of an arcuate curved protrusion with a **V-shaped** recess would have resulted in the formation of circular seals within the depth of the recess.

While Kosar discloses a number of different possible combinations of sectional shapes of recesses and protrusions, not a single one of those embodiments discloses or would have

suggested the presently claimed combination of features. Even among such a broad "menu" of choices, a person of ordinary skill in the art would have found no suggestion and no motivation toward the present inventive combination, and no suggestion that the inventive features could have been achieved thereby. Kosar discloses and teaches that the different shapes and shape combinations achieve different features, e.g. different placement of the circular seals. The teachings regarding the shape combinations and the placement of the circular seals are directly contrary to the present invention, as pointed out above.

Regarding the arcuate curved shape required by prior dependent claim 9 and present amended independent claim 7, the Examiner asserted that "*such a modification is considered nothing more than one of numerous shape configurations one skilled in the art would find obvious in order to achieve line of sealing contact...*". The Examiner's assertion is respectfully traversed. In the Election Requirement of April 28, 2003 and May 9, 2003 in this application, the Examiner expressly asserted that there is a patentable non-obvious distinction between various embodiments using different recess shapes and different protrusion shapes. Particularly, the Examiner asserted that there is a patentable non-obvious distinction between elected Fig. 2 (using a recess with an arcuate curved shape of wall portions) and non-elected Fig. 7 (using a V-shaped recess). The V-shaped groove of Fig. 1 of Kosar being applied in the rejection is like the groove shape of non-elected Fig. 7 of the present application, and unlike the elected groove shape of Fig. 2 of the present application. Since the Examiner asserted that there are

patentable distinctions between such various shapes (e.g. between Fig. 2 and Fig. 7 of this application) in the Election Requirement, the Examiner cannot now assert the opposite.

Also, it seems the Examiner may be inadvertently evaluating the prior art with the unallowable benefit of "hindsight knowledge" of the present invention. Namely, the obviousness determination must be made based on what would have been obvious to a person of ordinary skill in the art at the time the present invention was made. The Examiner, however, has stated that the shape modification is nothing more than what "*one skilled in the art would find obvious*", which appears to be applying the obviousness determination in the present tense at the present time. When going back to the time of the present invention, and considering the many different shape and circular seal combinations disclosed by Kosar, it is significant that none of those combinations correspond to or would have suggested the presently claimed combination. As pointed out above, while the shape combination of Fig. 1 of Kosar achieves the formation of two circular seals within the depth of the recess, that shape combination is unlike (and patentably distinguishable from) the presently claimed shape combination. On the other hand, Fig. 12 of Kosar, which has protrusion and recess shape aspects similar to the present invention, does not achieve two circular seals formed within the depth of the recess. Thus, the actual teachings, knowledge and expectations in the prior art as represented by Kosar would not have suggested the present invention. There is no actual prior art to support the Examiner's assertion.

For the above reasons, the Examiner is respectfully requested to withdraw the rejection of claims 7 to 12 as obvious over Schiavo et al. in view of Kosar.

5) Referring to the bottom of page 4 of the Office Action, the rejection of claim 13 as obvious over Schiavo et al. in view of Kosar and further in view of US Patent 5,154,827 (Ashelin et al.) is respectfully traversed. Applicant's remarks and arguments regarding this combination of references as set forth in the previous Response are incorporated herein by reference and expressly reasserted. In actual technical practice, it is difficult and causes problems to form a V-shaped groove in a housing bowl formed of fluororesin. Thus, a person of ordinary skill in the art knowing this or discovering this through an attempt would not have been motivated to form the groove configurations of applied Fig. 1 of Kosar in a housing bowl formed of fluororesin. To the contrary, as achieved by the presently claimed invention, it is preferable to form the groove in a fluororesin component having arcuate curved shape wall portions similarly as the arcuate curved protrusion. The references would have provided no guidance or suggestions in this regard, with respect to the Examiner's proposed modification of using a fluororesin material in combination with the other features as claimed. For these reasons, and in view of the dependence of claim 13 from claim 7, the Examiner is respectfully requested to withdraw the rejection of claim 13.

6) Referring to page 5 of the Office Action, the Examiner's comments in reply to applicants' prior arguments are appreciated, but it must be recognized that the mere post-hoc rationalization and explanation of benefits and advantages of the invention, as recognized with a hindsight understanding of the invention, are not a substitute for actual prior art teachings or understandings as demonstrated in the prior art references. Namely, the motivations asserted by the Examiner are benefits or advantages of the invention, but they were not disclosed or suggested in the prior art references.

7) Favorable reconsideration and allowance of the application, including all present claims 7, 8 and 10 to 13, are respectfully requested.

Respectfully submitted,

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10/18/04

Name: Walter F. Fasse - Date: October 18, 2004